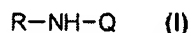


AMENDMENTS TO THE CLAIMS

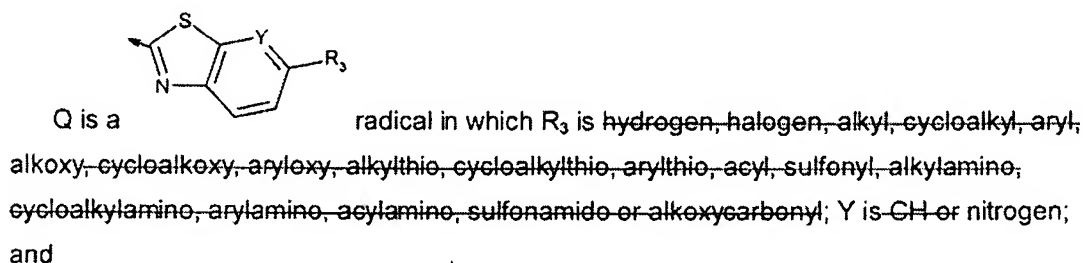
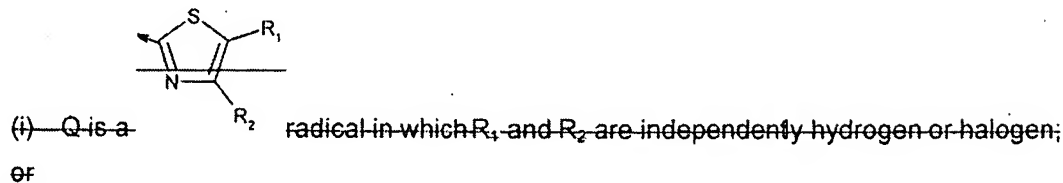
What is claimed is:

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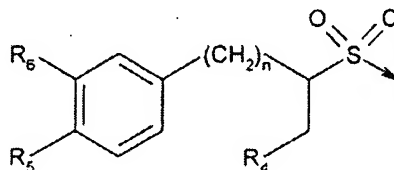
1. (Currently Amended) A compound of the formula



wherein



R is a radical of the formula



wherein

R₄ is C₂₋₄alkyl, C₃₋₇cycloalkyl or C₅₋₇heterocycloalkyl;

R₅ and R₆ are independently hydrogen, halogen, cyano, R₇, -C(O)R₇ or -S(O)₂R₇ wherein

R₇ is -(CR₈R₉)_m-W-R₁₀ in which

R₈ and R₉ are independently hydrogen or lower alkyl;

W is a bond, O, S or NR₁₁ in which

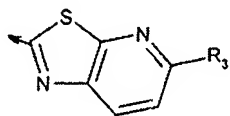
R₁₁ is hydrogen or lower alkyl;

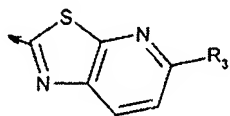
R₁₀ is hydrogen, alkyl, cycloalkyl, aryl or heterocyclyl; or R₁₀ and R₁₁ combined, are alkylene which together with the nitrogen atom to which they are attached form a 5 to 7 membered ring;

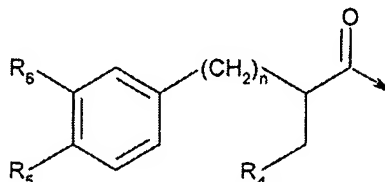
m is zero or an integer from 1 to 5;

n is zero or an integer of 1 or 2;

or an optical isomer thereof; or a pharmaceutically acceptable salt thereof; or



(ii) Q is a  radical in which R₃ is hydrogen, halogen, alkyl, cycloalkyl, aryl, alkoxy, cycloalkoxy, aryloxy, alkylthio, cycloalkylthio, arylthio, acyl, sulfonyl, alkylamino, cycloalkylamino, arylamino, acylamino, sulfonamido or alkoxycarbonyl; and R is a radical of the formula



wherein

R₄ is C₂₋₄ alkyl, C₃₋₇ cycloalkyl or C₅₋₇ heterocycloalkyl;

R₅ and R₆ are independently hydrogen, halogen, cyano, R₇, -C(O)R₇ or -S(O)₂R₇ wherein

R₇ is -(CR₈R₉)_m-W-R₁₀ in which

R₈ and R₉ are independently hydrogen or lower alkyl;

W is a bond, O, S or -NR₁₁ in which

R₁₁ is hydrogen or lower alkyl;

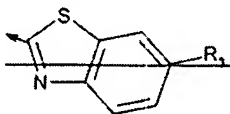
R₁₀ is hydrogen, alkyl, cycloalkyl, aryl or heterocyclyl; or R₁₀ and R₁₁ combined,

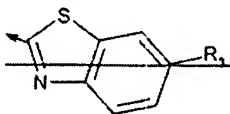
are alkylene which together with the nitrogen atom to which they are attached form a 5- to 7-membered ring;

m is zero or an integer from 1 to 5;

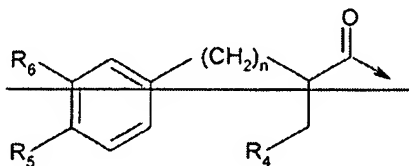
n is zero or an integer of 1 or 2;

or an optical isomer thereof; or a pharmaceutically acceptable salt thereof; or



(iii) Q is a  radical in which R₃ is hydrogen, halogen, alkyl, cycloalkyl, aryl, alkoxy, cycloalkoxy, aryloxy, alkylthio, cycloalkylthio, arylthio, acyl, sulfonyl, alkylamino, cycloalkylamino, arylamino, acylamino, sulfonamido or alkoxycarbonyl; and

R is a radical of the formula



wherein

R_4 is C_{2-4} alkyl, C_{3-7} cycloalkyl or C_{5-7} heterocycloalkyl;

R_5 and R_6 are independently hydrogen, halogen, cyano, R_7 , $C(O)R_7$ or $S(O)_2R_7$ wherein

R_7 is $(CR_8R_9)_m-W-R_{10}$ in which

R_8 and R_9 are independently hydrogen or lower alkyl;

W is a bond, O, S or NR_{11} in which

R_{11} is hydrogen or lower alkyl;

R_{10} is hydrogen, alkyl, cycloalkyl, aryl or heterocyclyl; or R_{10} and R_{11} , combined, are alkylene which together with the nitrogen atom to which they are attached form a 5- to 7-membered ring;

m is zero or an integer from 1 to 5;

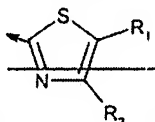
n is zero or an integer of 1 or 2;

provided that: (1) R_5 and R_6 are not halogen when n is zero; or (2) R_5 is not

$S(O)_2R_7$, wherein R_7 is $(CR_8R_9)_m-W-R_{10}$ in which m is zero, W is a bond and R_{10} is

C_{1-3} alkyl when n is zero;

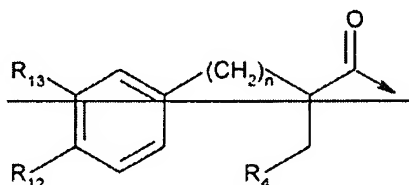
or an optical isomer thereof; or a pharmaceutically acceptable salt thereof; or



(iv) Q is a radical, wherein R_1 and R_2 are independently hydrogen or halogen;

and

R is a radical of the formula



wherein

R_4 is C_{2-4} alkyl, C_{3-7} cycloalkyl or C_{5-7} heterocycloalkyl;

R_{12} and R_{13} are independently hydrogen, halogen, cyano, R_{14} , $C(O)R_{14}$ or $S(O)_2R_{14}$

wherein

R_{14} is $(CR_8R_9)_m-W-R_{15}$ in which

R_8 and R_9 are independently hydrogen or lower alkyl;

W is a bond, O, S or NR_{11} in which

R_{11} is hydrogen or lower alkyl;

R_{15} is cycloalkyl, aryl or heterocyclyl; or R_{15} and R_{11} , combined, are alkylene

which together with the nitrogen atom to which they are attached form a 5- to 7-membered ring;

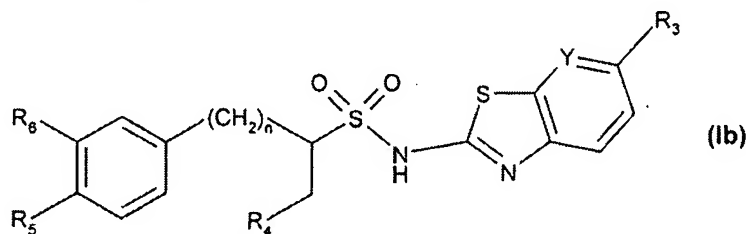
~~m is zero or an integer from 1 to 5;~~

~~n is zero or an integer of 1 or 2;~~

~~provided that: (1) R_{12} and R_{13} both are not hydrogen, halogen, cyano or combinations thereof; (2) R_{12} is not $-S(O)_2R_{14}$, wherein R_{14} is $-(CR_8R_9)_m-W-R_{15}$ in which m is zero and W is a bond when n is zero; (3) R_{12} is not $-S(O)_2R_{14}$, wherein R_{14} is $-(CR_8R_9)_m-W-R_{15}$ in which R_8 and R_9 are hydrogen, m is 1 and W is a bond when n is zero; (4) R_{12} is not R_{14} , wherein R_{14} is $-(CR_8R_9)_m-W-R_{15}$ in which m is zero and W is O when n is zero; or (5) R_{12} is not R_{14} , wherein R_{14} is $-(CR_8R_9)_m-W-R_{15}$ in which m is zero and W is a bond when n is zero;~~
or an optical isomer thereof; or a pharmaceutically acceptable salt thereof.

2 - 3. (Cancelled)

4. (Currently Amended) A compound according to Claim 1 of the formula



wherein

~~R_3 is hydrogen, halogen, alkyl, cycloalkyl, aryl, alkoxy, cycloalkoxy, aryloxy, alkylthio, cycloalkylthio, arylthio, acyl, sulfonyl, alkylamino, cycloalkylamino, arylamino, acylamino, sulfonamido or alkoxycarbonyl;~~

R_4 is C_{2-4} alkyl, C_{3-7} cycloalkyl or C_{5-7} heterocycloalkyl;

R_5 and R_6 are independently hydrogen, halogen, cyano, R_7 , $-C(O)R_7$ or $-S(O)_2R_7$ wherein

R_7 is $-(CR_8R_9)_m-W-R_{10}$ in which

R_8 and R_9 are, independently, hydrogen or lower alkyl;

W is a bond, O, S or $-NR_{11}$ in which R_{11} is hydrogen or lower alkyl;

R_{10} is hydrogen, alkyl, cycloalkyl, aryl or heterocyclyl; or R_{10} and R_{11} , combined, are alkylene which together with the nitrogen atom to which they are attached form a 5 to 7 membered ring;

m is zero or an integer from 1 to 5;

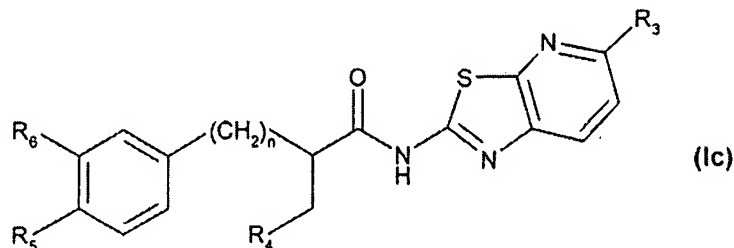
Y is CH or nitrogen;

n is zero or an integer of 1 or 2;

or an optical isomer thereof; or a pharmaceutically acceptable salt thereof.

5. (Original) A compound according to Claim 4, wherein
R₄ is cyclopentyl;
n is zero;
or an optical isomer thereof; or a pharmaceutically acceptable salt thereof.

6. (Currently Amended) A compound according to Claim 1 of the formula



wherein

R₃ is ~~hydrogen, halogen, alkyl, cycloalkyl, aryl, alkoxy, cycloalkoxy, aryloxy, alkylthio, cycloalkylthio, arylthio, acyl, sulfonyl, alkylamino, cycloalkylamino, arylamino, acylamino, sulfonamide or alkoxy carbonyl;~~

R₄ is C₂₋₄alkyl, C₃₋₇cycloalkyl or C₅₋₇heterocycloalkyl;

R₅ and R₆ are independently hydrogen, halogen, cyano, R₇, -C(O)R₇ or -S(O)₂R₇ wherein

R₇ is -(CR₈R₉)_m-W-R₁₀ in which

R₈ and R₉ are, independently, hydrogen or lower alkyl;

W is a bond, O, S or ~~NR₁₁~~ in which

~~R₁₁ is hydrogen or lower alkyl;~~

R₁₀ is hydrogen, alkyl, cycloalkyl, aryl or heterocyclyl; ~~or R₁₀ and R₁₁, combined, are alkylene which together with the nitrogen atom to which they are attached form a 5- to 7-membered ring;~~

m is zero or an integer from 1 to 5;

n is zero or an integer of 1 or 2;

or an optical isomer thereof; or a pharmaceutically acceptable salt thereof.

7. (Original) A compound according to Claim 6, wherein
R₄ is cyclopentyl;
n is zero;
or an optical isomer thereof; or a pharmaceutically acceptable salt thereof.

8 – 11. (Cancelled)

12. (Withdrawn) A method for the activation of glucokinase activity in mammals which method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1.

13. (Withdrawn) A method for the prevention and/or treatment of conditions associated with glucokinase activity in mammals which method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1.

14. (Withdrawn) The method according to claim 13, which method comprises administering said compound in combination with a therapeutically effective amount of insulin, insulin derived mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucose inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid; or aspirin.

15. (Withdrawn) A method for the treatment of impaired glucose tolerance, Type 2 diabetes and obesity which method comprises administering to a mammal in need thereof a therapeutically effective amount of a compound of claim 1.

16. (Original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claims 1 in combination with one or more pharmaceutically acceptable carriers.

17. (Original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of claim 1 in combination with a pharmaceutically effective amount of insulin, insulin derived mimetic; insulin secretagogue; insulinotropic sulfonylurea receptor ligand; PPAR ligand; insulin sensitizer; biguanide; alpha-glucose inhibitors; GLP-1, GLP-1 analog or mimetic; DPPIV inhibitor; HMG-CoA reductase inhibitor; squalene synthase inhibitor; FXR or LXR ligand; cholestyramine; fibrates; nicotinic acid; or aspirin.

18. (Previously Presented) A pharmaceutical composition according to claim 16 for the treatment of impaired glucose tolerance, Type 2 diabetes and obesity.

19 – 24. (Cancelled)

25. (New) A compound according to Claim 6, wherein the compound is:

